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CANADIAN PATENT

SAFETY TIP CIGARETTE

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The invention relates to an improved cigarette construction and, more particularly, to cigarettes having anti-fire safety attachments.

The patent literature is replete with cigarettes having added elements which purport either to extinguish the burning cigarette upon its reaching a predetermined zone, or to support the cigarette securely on an ash tray, as by adding a band of magnetic material, adjacent the tip end which clings to ferromagnetic material on the ash tray. Each of these
10 varieties, while serving a useful purpose in preventing fires, has heretofore been mutually exclusive in purpose and function. In other words, the safety cigarettes heretofore available have either been of the self-extinguishing kind or of the self-supporting variety.

It is therefore an object of the invention to provide a safety cigarette which is both self-extinguishing and self-supporting.

It is another object of the invention to provide a cigarette construction which is highly reliable in achieving
20 its multiple safety purposes.

It is yet another object of the invention to provide a safety cigarette which can readily and reliably be secured to substantially any supporting surface, regardless of whether the surface possesses magnetic properties.

It is still another object of the invention to provide a safety cigarette construction which is very economical.

It is a further object of the invention to provide a safety tip cigarette which will extinguish itself upon reaching a predetermined point regardless of the smoker's continued
30 drawing on the cigarette.

It is yet a further object of the invention to provide



a safety cigarette which is readily packaged in conventional cigarette packages or containers.

It is another object of the invention to provide a generally improved safety tip cigarette.

Other objects, together with the foregoing, are attained in the embodiment described in the following description and shown in the accompanying drawings in which:

Figure 1 is a perspective view of a cigarette with the safety attachment shown thereon;

10 Figure 2 is a transverse section, to an enlarged scale, of the Figure 1 form of device, the plane of the section being indicated by the line 2-2 in Figure 1;

Figure 3 is a view comparable to that of Figure 2 but drawn to emphasize the inner and outer tacky surfaces of the tape;

Figure 4 is a median, vertical longitudinal section of a cigarette having the safety band of double-surface cellulose tape disposed thereon; and

20 Figure 5 is a view comparable to that of Figure 3, but showing the appearance of the cigarette after the cigarette's fire has been extinguished.

While the safety tip cigarette of the invention is susceptible of numerous physical embodiments, depending on the environment and requirements of manufacture and use, substantial numbers of the herein shown and described embodiment have been made, tested and used, and all have performed in an eminently satisfactory manner.

30 The cigarette construction of the invention, generally designated by the reference numeral 12, comprises a conventional cigarette 13 including a hollow paper cylinder 14 enclosing shredded tobacco 16.

For convenience of description, one end of the cigarette will be designated as the front end 17, or forward end; the other end, as the tip end 18, or after end.

The safety device of the invention, it is clearly to be noted, is applicable to all varieties of cigarettes, whether the tip 18 be of the long-used conventional type or of the kind which incorporates some form of filter element.

It is further to be understood that while the embodiment shown and described herein is disposed on and projects
10 radially outwardly from the outer periphery of the cigarette paper cylinder, the device is equally efficacious where the safety members are set into the cigarette so that only the outermost elements of the safety attachment project radially from the outer envelope of the cigarette paper cylinder. This result can be effected either by substituting the cellulose band for the underlying cigarette paper or by wrapping the band so tightly around the paper as to constrict the paper sufficiently to accommodate the band without increasing the diameter.

20 In all forms of the device, the cellulosic band, designated by the numeral 21, is of the form which is coated on both surfaces with an adhesive layer. This is to say, on the inner surface of the tape band 21 there is provided a tacky adhesive layer 22 (see Figure 3); on the outer surface, a tacky adhesive layer 23.

As appears most clearly in the somewhat exaggerated showing in Figure 3, the inner, tacky, adhesive layer 22 clings tightly to the subjacent surface or periphery, of the cigarette paper 14.

30 The outermost adhesive layer 23, on the other hand, provides an equally tacky stratum. This outer layer 23 not only

cooperates with the inner adhesive layer 22 to provide the constricting, fire extinguishing result, hereafter to be described, but it also offers a sticky surface which clings to substantially any and all cigarette supporting members. In other words, while the cigarette is burning, the smoker can, by a quick motion, attach the tacky band surface 23 to an ash tray, to the edge of a piece of furniture, such as a chair, table or piano, or to any comparable object. This action can be undertaken in full confidence not only that the cigarette will adhere to the object but that as the cigarette burns to the cellulose band, the fire will be extinguished.

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It has been found that where the cellulose tape, made of regenerated cellulose, is coated on both sides of the tape with an adhesive layer, a severe, intense constrictive effect is achieved where heat is applied to one end of a band of such tape.

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Where, for example, a band of double-surfaced tape is applied adjacent the tip end 18 of a cigarette (see Figures 4 and 5), the cigarette will draw in normal fashion until the burning tobacco and hot ash approaches the band 21. As the plane of the burning tobacco approaches the adjacent end of the tape band, a physical-chemical change in the band and the double adhesive surfaces occurs. The effect of this change is to constrict the adjacent circular edge 25 of the band and to cause the band to assume the severely necked in shape indicated in Figure 5.

The precise reason why this intense "necking in" occurs is not clearly known. The result of this constriction, however, is quite apparent; it is an almost immediate extinguishment of the cigarette fire. This same, rapid effect is observed whether or not the smoker continues to draw on the

cigarette, and whether or not a wind is present, which would ordinarily affect the burning rate.

While the self-extinguishing and self-supporting features of the device are efficiently provided by the double-surfaced band of tape, it is sometimes preferred to cover the tape 21 with a band of metallic foil 26. The smooth, metallic foil band encompasses and adheres to the outer adhesive layer 23 of the tape and thus isolates or insulates each of the tacky layers from the others for convenience in packaging. In other words, with the metallic foil coatings, the safety cigarettes can be inserted in and removed from the package without sticking together. A tab 27 is provided by overlapping the foil a short distance, as appears in Figures 1 and 2, thus providing a ready means for stripping the foil from the underlying adhesive layer.

The foil serves an insulating purpose, and it serves to keep the adjacent adhesive layer moist and tacky for extended periods of time. The foil, being metallic, also serves an additional purpose for those who prefer to keep the foil in place while smoking. Retention of the foil not only provides a distinctive appearance, but furnishes a heat exchanging or heat dissipating effect so that when the cigarette fire reaches the metallic band and the underlying double-surfaced cellulose tape, constriction of the tape combines with the heat dissipating effect of the foil to cause the cigarette fire to be extinguished under substantially all conditions of use. Furthermore, at about the time constriction of the cellulose tape occurs, the metallic foil band becomes somewhat loosened and expands slightly, thus providing a visual indication to the smoker that the cigarette is "out".

A satisfactory tape material having adhesive on both

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faces is presently obtainable on the market under the name of "SCOTCH" brand "Double Stick Tape". The tape is made by Minnesota Mining and Manufacturing Company and the container therefor makes reference to Patents numbered 2,693,918, 2,889,038 2,897,960 and Re 24,906. The tape is provided with a pressure sensitive adhesive on both faces and has proven effective for applicant's purposes.

It can therefore be seen that we have provided a highly reliable and effective safety tip cigarette which is
10 capable both of supporting itself on any convenient surface and of extinguishing itself upon reaching a predetermined zone in the cigarette's length.

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A safety cigarette comprising: a cigarette provided with a body of tobacco and paper cover and having a front end and a tip end; and a band of cellulose tape having a layer of substantial thickness of pressure sensitive adhesive on each face thereof; said tape encircling at least said tobacco adjacent said tip end.

2. A safety cigarette as defined in claim 1 wherein said band encircles the outer surface of said paper cover and is adhered thereto.

3. A safety cigarette as defined in claim 2 including a band of non-sticky sheet material overlying said cellulose band and removably adhering to the outer layer of adhesive thereon.



